

Case 3035

***Trachelocerca* Ehrenberg (Ciliophora): proposed conservation of authorship as Ehrenberg (1840), with fixation of *Vibrio sagitta* Müller, 1786 as the type species**

John O. Corliss

P.O. Box 2729, Bala Cynwyd, Pennsylvania 19004, U.S.A.

Wilhelm Foissner

*Universität Salzburg, Institut für Zoologie, Hellbrunnerstrasse 34,
A-5020 Salzburg, Austria*

Abstract. The purpose of this application is the conservation of the generic name *Trachelocerca* Ehrenberg, 1840, in use for marine ciliates which have non-dividing macronuclei and belong to the group called Karyorelictea by Corliss (1994). *Trachelocerca* in this sense has *Vibrio sagitta* Müller, 1786 as the type species by monotypy. Recent workers have overlooked that six years earlier Ehrenberg [1834] had used the name *Trachelocerca* in a sense which would make it a junior synonym of *Lacrymaria* Bory de St. Vincent, [1824], a name in use for freshwater ciliates belonging to a different group. It is proposed that the earlier [1834] usage of *Trachelocerca* should be suppressed.

Keywords. Nomenclature; taxonomy; Protozoa; Ciliophora; Karyorelictea; *Trachelocerca*; *Trachelocerca sagitta*; *Lacrymaria*; marine ciliates.

1. Ehrenberg ([1834], p. 316) erected the freshwater protozoan genus *Trachelocerca* with three nominal species: *Vibrio olor* Müller, 1786 (p. 75) and the new species *T. biceps* and *T. viridis*. No type species was fixed. Bory de St. Vincent ([1824], p. 479) had earlier placed *V. olor* in his own new genus *Lacrymaria*, and in 1875 it was designated as the type species of that genus by Fromentel (p. 174). *T. biceps* is, according to our modern understanding of ciliate morphology, not a distinct species but a monster form of *Lacrymaria* sp., as indeed supposed possible by Ehrenberg ([1834]). *T. viridis* is closely related to *L. olor* but differs in having symbiotic algae; Kent (1881, p. 515) considered it to be a variety of *L. olor* and this has never been disputed, although there is no recent information about this species.

2. Ehrenberg (1840, p. 202) placed *Vibrio sagitta* Müller, 1786 (p. 59) in the nominal genus *Trachelocerca*. In doing this he mentioned neither any other species nor his previous use of the name *Trachelocerca*; he repeated Müller's diagnosis of *V. sagitta* and stated that it was marine (found in the Baltic and North Seas). Had *Trachelocerca* not been published in 1834 it would be available from Ehrenberg (1840), with *V. sagitta* as the type species by monotypy. The genus was treated in this way by Stein (1859, pp. 72, 80), but other workers used *Trachelocerca* in different and often vague senses (see Foissner & Dragesco, 1996, pp. 45–46).

3. Kahl (1930) and Dragesco (1960) both cited Ehrenberg (1840) as the author of *Trachelocerca*, unaware that Ehrenberg had originally established the name six years earlier. Kahl did not mention a type species, but Dragesco (p. 110) designated *Trachelocerca entzi* Kahl, 1927 as the type; this is invalid since the species was of course never included in the genus by Ehrenberg. Kahl's species does not belong to the same group (the Karyorelictea; Corliss, 1974, 1994) as *T. sagitta* (see Foissner, 1997).

4. Delphy (1939) split *Trachelocerca* into four genera, deliberately but unjustifiably citing Cohn (1866) as the author of the genus, and invalidly designated *T. phoenicopterus* Cohn, 1866 as the type species. Cohn himself (p. 264) had cited Ehrenberg (1840) as the author of *Trachelocerca*. Dragesco (1960, p. 120) designated *T. phoenicopterus* as the type species of his new genus *Tracheloraphis*.

5. Foissner & Dragesco (1996) gave Ehrenberg (1840) as the author of *Trachelocerca* and *Vibrio sagitta* Müller, 1786 as the type species by monotypy (cf. para. 2 above). Like the other authors mentioned above they overlooked the fact that *Trachelocerca* had been published by Ehrenberg in 1834, with different included species. Foissner & Dragesco thoroughly redescribed and illustrated *T. sagitta* from the French Atlantic coast, together with other species.

6. *Trachelocerca* is well established in modern ciliate literature as comprising exclusively marine species with uniquely non-dividing diploid macronuclei, like *T. sagitta* (see for example Dragesco, 1960; Corliss, 1979; Foissner & Dragesco, 1996).

7. If *Trachelocerca* were to be taken from Ehrenberg ([1834]) it would fall as a junior subjective synonym of *Lacrymaria* Bory de St. Vincent, 1824, a genus also well established in current literature but for a very different group of species (see Corliss, 1979). *Trachelocerca* Ehrenberg, 1840, always used in recent decades for species related to *Vibrio sagitta* Müller, 1786, could be replaced by the junior subjective synonyms *Gruvelina* or *Nephrocerca*, both of Delphy (1939), but this would involve changes in many well established ciliate names.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to suppress the generic name *Trachelocerca* Ehrenberg, [1834] and all uses of that name prior to its publication by Ehrenberg (1840) for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Trachelocerca* Ehrenberg, 1840 (gender: feminine), type species by monotypy *Vibrio sagitta* Müller, 1786;
- (3) to place on the Official List of Specific Names in Zoology the name *sagitta* Müller, 1786, as published in the binomen *Vibrio sagitta* (specific name of the type species of *Trachelocerca* Ehrenberg, 1840);
- (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Trachelocerca* Ehrenberg, [1834], as suppressed in (1) above.

Acknowledgement

We thank Dr Erna Aescht (Biologiezentrum des Oberösterreichischen Landesmuseum Linz, Austria) for calling our attention to the problem discussed in this paper.

References

- Bory de St. Vincent, J.R.G.M.** [1824]. Lacrimatoire; lacrimatoria. Pp. 479–480 in: *Encyclopédie méthodique. Histoire naturelle des Zoophytes, ou Animaux rayonnées*, vol. 2. 819 pp. Agasse, Paris.
- Cohn, F.** 1866. Neue Infusorien im Seeaquarium. *Zeitschrift für Wissenschaftliche Zoologie*, **16**: 253–302.
- Corliss, J.O.** 1974. Remarks on the composition of the large ciliate class Kinetofragmophora de Puytorac et al., 1974, and recognition of several new taxa therein, with emphasis on the primitive order Primociliatida n. ord. *Journal of Protozoology*, **21**: 207–220.
- Corliss, J.O.** 1979. *The ciliated protozoa: characterization, classification and guide to the literature*. Ed. 2. 455 pp. Pergamon Press, Oxford and New York.
- Corliss, J.O.** 1994. An interim utilitarian ('user-friendly') hierarchical classification and characterization of the protists. *Acta Protozoologica*, **33**: 1–51.
- Delphy, J.** 1939. *Gruvelina* nov. gen. *longissima* nov. sp. et quelques autres protozoaires ciliés observés à Dinard. *Bulletin du Laboratoire maritime de Dinard*, **20**: 52–55.
- Dragesco, J.** 1960. Ciliés mésopsammiques littoraux. Systématique, morphologie, écologie. *Travaux de la Station biologique de Roscoff (nouvelle série)*, **12**: 1–356.
- Ehrenberg, C.G.** [1834]. Dritter Beitrag zur Erkenntniss grosser Organisation in der Richtung des kleinsten Raumes. *Abhandlungen der Preussischen Akademie der Wissenschaften zu Berlin, 1833*: 145–336. [Published in the serial in 1835 but issued as a separate in 1834].
- Ehrenberg, C.G.** 1840. [Das grössere Infusorienwerk (Diagnosen von 274 neuen Infusorien)]. *Monatsberichte und Verhandlungen der Königlichen Preussischen Akademie der Wissenschaften zu Berlin, 1840*: 197–219.
- Foissner, W.** 1997. Updating the trachelocercids (Ciliophora, Karyorelictea). IV. Transfer of *Trachelocerca entzi* Kahl, 1927 to the Gymnostomatea as a new genus, *Trachelotractus* gen. n. (Helicoproodontidae). *Acta Protozoologica*, **36**: 63–74.
- Foissner, W. & Dragesco, J.** 1996. Updating the trachelocercids (Ciliophora, Karyorelictea). III. Redefinition of the genera *Trachelocerca* Ehrenberg and *Tracheloraphis* Dragesco, and evolution in trachelocercid ciliates. *Archiv für Protistenkunde*, **147**: 43–91.
- Fromentel, E. de.** 1874–1876. *Études sur les microzoaires ou infusoires proprement dits comprenant de nouvelles recherches sur leur organisation, leur classification et la description des espèces nouvelles ou peu connues*. 364 pp. Masson, Paris.
- Kahl, A.** 1930. Urtiere oder Protozoa 1: Wimpertiere oder Ciliata (Infusoria). Allgemeiner Teil und Prostomata. *Tierwelt Deutschlands und der angrenzenden Meeresteile*, **18**: 1–180.
- Kent, W.S.** 1881. *A manual of the infusoria; including a description of all known flagellate, ciliate, and tentaculiferous Protozoa British and foreign, and an account of the organization and affinities of the sponges*, vol. 2 (pp. 433–720). Bogue, London.
- Müller, O.F.** 1786. *Animalcula Infusoria fluviatilia et marina, quae detexit, systematice descriptis et ad vivum delineari curavit*. 367 pp. Mölleri, Hauniae.
- Stein, F.** 1859. *Der Organismus der Infusionsthier nach eigenen Forschungen in systematischer Reihenfolge bearbeitet. I. Abtheilung. Allgemeiner Theil und Naturgeschichte der hypotrichen Infusionsthier*. Engelmann, Leipzig.